

## Industry Background

Global container shipping is a \$400B a year enterprise. Half of the sector's operating costs are allocated for fuel; another 37% is applied to moving containers between ships, trains and trucks at container terminal facilities. Reducing the time to load cargo onto other transports will generate significant savings to shipping carriers and Class 1 railroads, and create business opportunities for ports. New ultra-large container ships hold 300% more containers than their antecedents could 20 years ago. The emergence of these more-efficient fleets has spurred industry to anticipate shifts in global trade route patterns, increase transshipment activity (ship-to-ship transfer), and recognize the demand for strategic and innovative port upgrades.

## Abstract

GRID Logistics Inc. is pioneering a transformation of the 50-year-old conventional container movement network by engineering a seamless integration of ship-train-truck movement between ports and inland destinations. This state-of-the-art design is a practical, scalable, and exportable container management system capable of generating long-term operational revenue. Our primary service comprises loading and discharge of all ships, including next-generation ultra-large container ships, and trains, with new crane and container terminal designs. The GRID systems will improve:

- Ship loading and unloading: reducing vessel dwell times by up to 75% for all ships;
- Train processing: reducing Class 1 train discharge/load-back time by up to 90%;
- Environmental impact: reducing pollution caused by the goods movement system.

These efficiency improvements will encourage shippers and railroads to use the GRID infrastructure in order to maintain competitiveness.

## Business Model

GRID Logistics Inc. will develop specialized design/build management services and terminal operator concessions over the course of its business development by serving as:

1. Project Manager to all facets of an \$18B multi-year regional/port transportation infrastructure project serving four Southern California counties, and manufacturer of concrete tunnel liner segments for the 137-mile freight pipeline;
2. Operations Manager and Stevedore to its San Pedro Bay (SPB) Container Port Complex, servicing the container shipping, trucking, and Class 1 intermodal train sectors;
3. Distribution Manager for a freight pipeline to move drone trains of containers to and from inland feeder terminals with hub-and-spoke "last mile" truck delivery operations.

## The GRID System

The GRID system consists of: 1) the SuperDock™, a new Ship-to-Shore patent-pending platform designed to speed ship and train loading; 2) a 137-mile freight pipeline circuit to Los Angeles and the Inland Empire, allowing automated container trains, powered by linear electric motors, to operate "out of sight, out of mind" between the Ports and inland container terminals; and 3) strategically located "Feeder Terminals" designed to transfer containers between the freight pipeline and "last mile" truck deliveries to and from local warehouse clusters. The pipeline and terminals will reduce regional port-related highway truck traffic by up to 70%. Each of these components is a new configuration of existing best available technologies.

# Executive Summary



## Market Segments

GRID Logistics will meet the needs of the following three key market segments.

### Market 1 – Sole Container Stevedore for San Pedro Bay

The combined Ports of Los Angeles and Long Beach in San Pedro Bay comprise the 8th largest container shipping port in the world. For this market, we envision containers flowing seamlessly along a newly designed logistic system that replaces old supply chains. This is only possible through massive consolidation of container docking activities.

It is important to note that the entire GRID system is designed to be physically separated from current container terminal operations during the construction phase. Building our new freight transportation infrastructure will not impede present-day operations.



*New Port Complex requires only half the land area (in blue) currently utilized by the separately operating ports of Los Angeles and Long Beach*



*137-Mile Freight Pipeline Route. Feeder terminals are the Green dots. Blue dots show port related consolidation warehouse clusters.*

### Market 2 – Service for Class 1 Rail and Drone Trains

The SuperDock™ accommodates two generations of rail service: 1) Class 1 heavy rail freight on the BNSF and Union Pacific rail lines using surface networks that include the Alameda Corridor and Alameda Corridor East; and 2) GRID's freight pipeline and pipeline terminal operations, which will replace most current truck-to-port logistics.

The freight pipeline is a new right-of-way that GRID will own and operate. This proposed 137-mile pipeline will be located beneath freeway routes. The pipeline will run through portions of Los Angeles, Orange, Riverside and San Bernardino Counties. Infrastructure cost for the pipeline and terminals will be paid privately by tolls on port-related freight. Efficiency and volume of the new system will allow infrastructure repayment without raising taxes or freight costs.

### Market 3 – Freight Pipeline Use for Non-Port (City-to-City) Freight

GRID will further develop the freight pipeline as a city-to-city freight delivery network with strong potential for generating non-port-related freight delivery revenues, exploiting the freight pipeline's high throughput capacity with new freight delivery concession opportunities.

# Executive Summary

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## Labor

The GRID Logistics, Inc. proposal has been endorsed by the Laborers International Union of North America, the Building Trades Councils representing the four target Southern California counties, the Operating Engineers Local 12, and the International Brotherhood of Teamsters at West Coast leadership levels, provided it is built under a project labor agreement. To date, the International Longshore and Warehouse Union (ILWU) has been neutral on GRID. We have prepared a detailed business plan that will demonstrate GRID's advantages for the ILWU, and we expect to gain their support.

## Environment

Our GRID System proposal has been officially endorsed by the Sierra Club, which sees the proposal's potential for reducing greenhouse gas emissions, pollution, and congestion.

## Immediate Next Steps

An independent evaluation of the GRID Project will demonstrate the practicality, financial feasibility, and environmental benefits of our vision. California State University at Northridge has partnered with GRID Logistics, Inc. to develop a grant proposal for funding a \$1.7M, 20-month computer simulation and feasibility study.

During the 20-month study period, GRID Logistics will actively cultivate business relationships with the Ports of Long Beach and Los Angeles, various international shipping lines, inland municipalities (particularly where feeder terminal complexes are positioned), and the BNSF and UP railroads, both of which are aware of the project. As a deal structure emerges, the "GRID Freight Transportation Infrastructure Project" will begin to acquire partnering agreements with private contracting partners to form the "GRID Consortium."

## Initial Investment Funding

GRID Logistics, Inc. has just begun acquiring funding commitments to raise \$250k in seed investment to provide a 12-month runway to raise \$5M of early stage venture capital in order to finance our Company's business operations over a 3-year period.

## Conclusion

Participation by the San Pedro Bay Ports, shipping lines, and the Class 1 railroads will be supported by demands from stakeholders in the inland regions as they are made aware of GRID's benefits to their communities. That demand will grow as municipalities, residents and businesses see that freight transportation infrastructure can support local economic growth with minimized negative impacts. The goal of removing port-related traffic from the highway system is strongly supported by the region's citizenry, environmental justice groups, and labor unions. These goals can be profitably achieved through the GRID Logistics proposal without increasing taxes or overall freight delivery costs.

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